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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/691,987	10/23/2003	Ian Robinson	NG(ST)-6569	2455

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EXAMINER	
MOTTOLA, STEVEN J	

ART UNIT	PAPER NUMBER
2817	

DATE MAILED: 02/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

N·A

Office Action Summary	Application No.	Applicant(s)	
	10/691,987	ROBINSON ET AL.	
	Examiner	Art Unit	
	Steven J. Mottola	2817	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-33* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4,9-11,13-16 and 22-33* is/are rejected.

7)☒ Claim(s) *5-8,12 and 17-21* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *102303*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 30 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. While paragraph 38 of the specification describes how the supply voltage is varied in response to input peaks it is not explained how the peaks themselves are reduced as claimed.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-4,9-11,13-16, 22-29 and 31-33 are rejected under 35 U.S.C. 102(e) as being anticipated by Winter et al.

Note that although two inventors are shared between this patent application publication and the present application, the inventive entity is different. Treating claims 1-2,15-16 and 25-26 first, Winter et al. disclose in fig. 5 for instance a power amplifier 96 that may be a switching amplifier (next to last sentence of paragraph 46 specifies

switching classes of amplifiers) and read as the switching amplifier of claims 1 and 15 or the means for amplifying of claim 25 and where the supply voltage to the power amplifier is controlled according to a characteristic of the input signal (such as envelope) and a threshold level. See paragraph 42. Thus the mode selector 84 may be read as the supply control device of claim 1 or the digital control device of claim 15 modifying the supply as in claim 16 or as the means for modifying the supply of claim 25. The DAC 91 converts the signal input to the amplifier to analog form and may be read as the DAC of claims 2 and 15 (and may incorporate a 1-bit DAC as in claims 3 and 22; see paragraph 45) and as the means converting of claim 26. The delta sigma modulator 89 of Winter et al. may be read as the binary waveform converter of claims 4,10,15,22 and 25. Since the input signal is digital and has amplitude and phase modulation associated with it (paragraphs 40-41) and may be generated by a CPU (fig. 7) it may be referenced as an n-bit word. The threshold may be an envelope amplitude level as specified in claims 4 and 23 (see paragraphs 22 and 24). The mode selector 84 along with predistorter 86 also meets the claimed functions of claims 9,24 and 27 as it will dynamically adjust the supply in accordance with input signal changes relative to the above threshold. Regarding claims 11,28 and 29, digital cross cancellation component 130 (paragraph 54) of fig. 6 may be used instead of the predistorter 86 of fig. 5 and generates a clean reference signal as claimed to be combined with a portion of the output from the amplifier at summer 164 to develop an error signal which is inverted by inverter 168 and combined with a delayed output signal (delay 171) as claimed, though note that predistorter 86 could itself be read on the means for linearizing of claim 28.

Claims 13-14 specify intended uses of the invention, though note that the reference specifies the same uses at paragraph 59. Claim 31 mixes previously addressed limitations: the mode selector 84 of Winter et al. performs the determining step claimed, the delta sigma modulator 89 and DAC 91 perform the respective converting steps while the power amp which may be a switching amplifier as noted above performs the amplifying step while the supply is adjusted by the mode selector 84 and predistorter 86. Regarding claim 32, the intended use of Winter et al. is for a transmitter; the signal would inherently be transmitted to a receiver in any practical application. Regarding claim 33, the first converting step in parent claim 31 has been read as being performed by a delta sigma modulator as noted above.

Claims 5-8,12 and 17-21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
The peak amplifier of claims 5-8 & 17-21 and DC-DC converter of claim 12 are not disclosed in the context claimed by the prior art of record.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven J. Mottola whose telephone number is 571-272-1766. The examiner can normally be reached on M-Th from 8 to 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert J. Pascal, can be reached on 571-272-1769. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Steven J. Mottola
Primary Examiner